Attorney's Docket No.:10559/105001/P7639/Intel Corporation

In the claims:

Please amend the claims as follows:

1. (Currently amended) A method of implementing a two-dimensional inverse discrete cosine transform, comprising:

executing two one-dimensional inverse discrete cosine transforming functions, each of the functions being controlled to operate on a matrix of coefficients in concurrently ~~either of~~ two ~~different~~ same directions and to periodically change said directions.

2. (Original) The method of claim 1 in which one of the directions is row order.

3. (Original) The method of claim 1 in which one of the directions is column order.

4. (Currently Amended) The method of claim 1 ~~in which~~ further comprising a sequencer which determines which direction each function operates in for a given matrix.

5. (Currently Amended) The method of claim 1 ~~in which~~ further comprising an address generator generates an address for each coefficient in the matrix.

6. (Currently Amended) The method of claim 1 wherein said executing, executes ~~in which~~ the functions ~~are~~ concurrently ~~executed~~ in the same direction on two different matrices of coefficients.

7. (Original) The method of claim 1 in which the functions are concurrently executed in the same direction, the functions switching periodically and concurrently to the other direction.

8. (Currently Amended) A storage medium bearing a machine-readable program capable of causing a machine to:

execute two one-dimensional inverse discrete cosine transforming functions, each of the functions being controlled to operate on a matrix of coefficients in either of two different directions but carrying out both of said functions in the same direction concurrently, and periodically changing said direction.

9. (Original) The medium of claim 8 in which one of the directions is row order.

10. (Original) The medium of claim 8 in which one of the directions is column order.

11. (Original) The medium of claim 8 in which a sequencer determines which direction each function operates in for a given matrix.

12. (Original) The medium of claim 8 in which an address generator generates an address for each coefficient in the matrix.

13. Original) The medium of claim 8 in which the functions are concurrently executed in the same direction on two different matrices of coefficients.

14. (Original) The medium of claim 8 in which the functions are concurrently executed in the same direction, the functions switching periodically and concurrently to the other direction.

15. (Currently Amended) A method of implementing a two-dimensional inverse discrete cosine transform, comprising:

first executing a first one-dimensional inverse discrete cosine transforming function in a first direction on a first matrix of coefficients to produce a matrix of intermediate results; ~~and~~

second, after said first executing, executing a second one-dimensional discrete cosine transform in a second, different

direction on a second matrix of coefficients to produce another matrix of intermediate results;

executing a ~~second~~ third one-dimensional inverse discrete cosine transforming function in ~~a~~ said second~~, different~~ direction on the matrix of intermediate results concurrent with ~~the first function~~ said second executing in the second direction on ~~a~~ said second matrix of coefficients~~,~~; and

~~in which the functions switch~~ periodically ~~and concurrently~~ switching said executing between the first and second directions.

16. (Original) The method of claim 15 in which the first direction is row order.

17. (Original) The method of claim 15 in which the first direction is column order.

18. (Cancelled)

19. (Currently Amended) A storage medium bearing a machine-readable program capable of causing a machine to:

execute a first one-dimensional inverse discrete cosine transforming function, where the first function executes in a

first direction on a first matrix of coefficients, producing a matrix of intermediate results; and

execute a second one dimensional inverse discrete cosine transforming function on a second direction on a second matrix of coefficients;

execute a second one-dimensional inverse discrete cosine transforming function, where the second function executes in said ~~a~~ second~~, different~~ direction on the matrix of intermediate results concurrent with the ~~first~~ execute a second function ~~executing in the second direction~~ on ~~a~~ the second matrix of coefficients,

in which the functions switch periodically and concurrently between the first and second directions.

20. (Original) The medium of claim 19 in which the first direction is row order.

21. (Original) The medium of claim 19 in which the first direction is column order.

22. (Original) The medium of claim 19 in which the functions switch periodically and concurrently between the first and second directions.

23. (Original) An apparatus implementing a two-dimensional inverse discrete cosine transform, comprising:

two one-dimensional inverse discrete cosine transform blocks;

a memory block;

a sequencer block, the sequencer block alternately being in one of two states, each state indicating the direction of operation of both each one-dimensional inverse discrete cosine transform block ~~operates in~~, and

an address generator block.

24. (Original) The apparatus of claim 23 in which the address generator block is to generate addresses for the one-dimensional inverse discrete cosine transform blocks in the direction indicated by the state of the sequencer.

25. (Currently Amended) A computer system including a processor, comprising:

two one-dimensional inverse discrete cosine transform blocks;

a memory block;

a sequencer block, the sequencer block alternately being in one of two states, each state indicating the direction of

operation of both ~~each~~ one-dimensional inverse discrete cosine transform block ~~operates in~~; and

an address generator block.

26. (Original) The system of claim 25 in which the address generator block is to generate addresses for the one-dimensional inverse discrete cosine transform blocks in the direction indicated by the state of the sequencer.

27. (Cancelled)

Please add the following new claims:

28. (New) A method as in claim 15, wherein said second one-dimensional inverse discrete cosine transforming function and said third one-dimensional inverse discrete cosine transforming function occur concurrently in the same direction.